

09/581594

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(FILE 'HOME' ENTERED AT 09:32:54 ON 26 SEP 2001)

FILE 'CA' ENTERED AT 09:33:07 ON 26 SEP 2001
L1 99 S (ABSORB? OR ADSORB? OR SPRAY? OR OVERSPRAY?) (P) (NONIONIC OR
A
L2 9 S L1 AND (BULK OR APPARENT OR TAMPED) (2W) DENSIT?
L3 14 S (ABSORB? OR ADSORB? OR SPRAY? OR OVERSPRAY?) (10A) (NONIONIC
OR
L4 12 S L3 NOT L2

FILE 'USPATFULL' ENTERED AT 09:53:54 ON 26 SEP 2001
L5 119 S L3 AND (BULK OR APPARENT OR TAMPED) (2W) DENSIT?
L6 37326 S. (MIX?) (P) (PADDLE OR SCREW OR RIBBON)
L7 27 S L5 AND L6
L8 5 S L5 AND FROUDE
L9 23 S L7 NOT L8

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=> s (absorb? or adsorb? or spray? or overspray?) (p) (nonionic or anionic) and
(coat? or dust? or postmix? or post mix? or postdos? or post dos? or post
add?) (p) (fine powder or zeolite# or silicate# or aluminosilicate#)

290620 ABSORB?

245739 ADSORB?

181562 SPRAY?

442 OVERSPRAY?

55356 NONIONIC

87391 ANIONIC

8605 (ABSORB? OR ADSORB? OR SPRAY? OR OVERSPRAY?) (P) (NONIONIC OR
ANIONIC)

777373 COAT?

96298 DUST?

15 POSTMIX?

132048 POST

2102261 MIX?

64 POST MIX?

(POST (W) MIX?)

848 POSTDOS?

132048 POST

688162 DOS?

777 POST DOS?

(POST (W) DOS?)

132048 POST

2489061 ADD?

127 POST ADD?

(POST (W) ADD?)

205366 FINE

364778 POWDER

7097 FINE POWDER

(FINE (W) POWDER)

83814 ZEOLITE#

154406 SILICATE#

32430 ALUMINOSILICATE#

22319 (COAT? OR DUST? OR POSTMIX? OR POST MIX? OR POSTDOS? OR POST
DOS? OR POST ADD?) (P) (FINE POWDER OR ZEOLITE# OR SILICATE# OR
ALUMINOSILICATE#)

L1 99 (ABSORB? OR ADSORB? OR SPRAY? OR OVERSPRAY?) (P) (NONIONIC OR
ANIONIC) AND (COAT? OR DUST? OR POSTMIX? OR POST MIX? OR

POSTDOS
? OR POST DOS? OR POST ADD?). (P) (FINE POWDER OR ZEOLITE# OR
SILIC

ATE# OR ALUMINOSILICATE#)

=> s 11 and (bulk or apparent or tamped) (2w) densit?

206479 BULK

226039 APPARENT

310 TAMPED

251491 DENSIT?

2623 (BULK OR APPARENT OR TAMPED) (2W) DENSIT?

L2 9 L1 AND (BULK OR APPARENT OR TAMPED) (2W) DENSIT?

=> d 1-9 12 ti

L2 ANSWER 1 OF 9 CA COPYRIGHT 2001 ACS

TI High-**bulk-density** granular laundry detergent
compositions in paper-based containers

L2 ANSWER 2 OF 9 CA COPYRIGHT 2001 ACS
TI High-**bulk-density** granular laundry detergent compositions with good fluidity

L2 ANSWER 3 OF 9 CA COPYRIGHT 2001 ACS
TI Nonionic surfactant-containing particles and manufacture of high-**bulk density** powdered detergents by adding them

L2 ANSWER 4 OF 9 CA COPYRIGHT 2001 ACS
TI High **bulk density** detergent compositions containing polycarboxylate in separate granules and its use

L2 ANSWER 5 OF 9 CA COPYRIGHT 2001 ACS
TI Detergent compositions with high **bulk density** and their manufacture

L2 ANSWER 6 OF 9 CA COPYRIGHT 2001 ACS
TI Process for increasing the **bulk density** of a granular detergent composition

L2 ANSWER 7 OF 9 CA COPYRIGHT 2001 ACS
TI Manufacture of caking-resistant nonionic surfactant granule compositions with high **bulk density** and flowability

L2 ANSWER 8 OF 9 CA COPYRIGHT 2001 ACS
TI High **bulk density** granular detergent compositions containing carbonate builder

L2 ANSWER 9 OF 9 CA COPYRIGHT 2001 ACS
TI Process for increasing the **bulk density** of spray-dried detergents with a reduced phosphate content

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=> d 3, 6, 7, 9 12

L2 ANSWER 3 OF 9 CA COPYRIGHT 2001 ACS
AN 127:20020 CA
TI Nonionic surfactant-containing particles and manufacture of high
bulk density powdered detergents by adding them
IN Hashimoto, Shinichi; Inotsuka, Takashi; Fukutome, Shinichi; Abe, Seiji
PA Lion Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 09100498 | A2 | 19970415 | JP 1995-279758 | 19951003 |

L2 ANSWER 6 OF 9 CA COPYRIGHT 2001 ACS
AN 121:303602 CA
TI Process for increasing the **bulk density** of a granular
detergent composition
IN Van Dijk, Paul; Vega, Jose Luis; France, Paul Amaat Raymond G.
PA Procter and Gamble Co., USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 9405761 | A1 | 19940317 | WO 1993-US8151 | 19930830 |
| | W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, VN | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | EP 660873 | A1 | 19950705 | EP 1993-922135 | 19930830 |
| | EP 660873 | B1 | 20010606 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | | |
| | JP 08500631 | T2 | 19960123 | JP 1993-507370 | 19930830 |
| | AU 677238 | B2 | 19970417 | AU 1993-51245 | 19930830 |
| | CA 2143628 | C | 19990112 | CA 1993-2143628 | 19930830 |
| | ES 2157223 | T3 | 20010816 | ES 1993-922135 | 19930830 |
| | CN 1086258 | A | 19940504 | CN 1993-118968 | 19930901 |
| | CN 1061369 | B | 20010131 | | |
| | FI 9500913 | A | 19950228 | FI 1995-913 | 19950228 |
| | NO 9500768 | A | 19950428 | NO 1995-768 | 19950228 |
| PRAI | EP 1992-870138 | A | 19920901 | | |
| | EP 1993-200460 | A | 19930218 | | |
| | WO 1993-US8151 | W | 19930830 | | |

L2 ANSWER 7 OF 9 CA COPYRIGHT 2001 ACS

AN 119:162902 CA
TI Manufacture of caking-resistant nonionic surfactant granule compositions
with high **bulk density** and flowability
IN Yamashita, Hiroyuki; Kondo, Hiroyuki; Hatano, Koichi; Nakano, Katsunori;
PA Toyoda, Koji
Kao Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 05125400 | A2 | 19930521 | JP 1992-107460 | 19920427 |
| PRAI | JP 1991-112929 | | 19910517 | | |
| | JP 1991-194268 | | 19910802 | | |

L2 ANSWER 9 OF 9 CA COPYRIGHT 2001 ACS

AN 112:38748 CA

TI Process for increasing the **bulk density** of spray-dried detergents with a reduced phosphate content

IN Jacobs, Jochen; Jahnke, Ulrich; Jung, Dieter; Loeffelmann, Rudolf; Adler, Wilfried

PA Henkel K.-G.a.A., Fed. Rep. Ger.

SO Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------------------------------|------|----------|-----------------|----------|
| PI | EP 337330 | A2 | 19891018 | EP 1989-106222 | 19890408 |
| | EP 337330 | A3 | 19900411 | | |
| | EP 337330 | B1 | 19960515 | | |
| | R: AT, BE, CH, DE, ES, FR, IT, LI, NL | | | | |
| | DE 3812530 | A1 | 19891026 | DE 1988-3812530 | 19880415 |
| | AT 138096 | E | 19960615 | AT 1989-106222 | 19890408 |
| | ES 2086308 | T3 | 19960701 | ES 1989-106222 | 19890408 |
| | DK 8901823 | A | 19891016 | DK 1989-1823 | 19890414 |
| | JP 01311200 | A2 | 19891215 | JP 1989-96206 | 19890414 |
| | US 5149455 | A | 19920922 | US 1991-644469 | 19910118 |
| PRAI | DE 1988-3812530 | | 19880415 | | |
| | US 1989-335904 | | 19890410 | | |

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L2 ANSWER 3 OF 9 CA COPYRIGHT 2001 ACS
AN 127:20020 CA

TI Nonionic surfactant-containing particles and manufacture of high
bulk density powdered detergents by adding them
IN Hashimoto, Shinichi; Inotsuka, Takashi; Fukutome, Shinichi; Abe, Seiji
PA Lion Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C11D011-00

ICS C11D010-02; C11D001-66; C11D003-10; C11D003-12; C11D001-83

CC 46-6 (Surface Active Agents and Detergents)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|-----------------|----------|
| PI | JP 09100498 | A2 | 19970415 | JP 1995-279758 | 19951003 |
| AB | Inorg. builders comprising zeolite and Na ₂ CO ₃ are mixed in rolling granulizer drum and sprayed by 7-20% nonionic surfactants at spraying d. (D). $\text{ltoreq.} 3 \text{ g/cm}^2\text{-min}$ and Froude no. F 0.1-0.8; F = $\pi \cdot Dn / (gD/2)^{1/2}$ (D = diam. of drum; n = rps; g = acceleration of gravity) to give title particles contg. reduced amts. of large particles, which show improved fluidity. The caking-resistant detergents are manufd. by blending the particles with compns. contg. anionic surfactants, water-sol. inorg. builders, etc., so that the contents of the nonionic surfactants are 0.5-5% vs. the total compns. Thus, 10/77 mixt. of zeolite and Na ₂ CO ₃ was sprayed by polyethylene glycol dodecyl ether at D = 1.1 g/cm ² -min and F = 0.7 to give title particles, 5% of which was blended with a compn. contg. Na C14-18 .alpha.-sulfofatty acid Me ester salt, Na C12-16 .alpha.-olefinsulfonate, Na C16-18 fatty acid salt, zeolite, and other additives to give title detergent contg. 4.5% particle with diam. $\text{ltoreq.} 52 \mu\text{m}$ and good caking resistance. | | | | |

ST **nonionic** surfactant addn powd detergent; builder particle

nonionic surfactant **spraying**; high **bulk**

density detergent **nonionic** surfactant; fluidity improved

nonionic surfactant coated particle; caking resistance detergent

nonionic surfactant; Froude no regulation **spraying**

surfactant

IT **Zeolites** (synthetic), uses

RL: TEM (Technical or engineered material use); USES (Uses)

(builders comprising **zeolite** and sodium carbonate

coated by nonionic surfactants for high bulk d. detergents)

IT Fatty acids, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(ethoxylated, ethoxylated, nonionic surfactants; builders comprising

zeolite and sodium carbonate **coated** by nonionic

surfactants for high bulk d. detergents)

IT Detergents

Nonionic surfactants

(manuf. of high bulk d. powd. detergents with caking resistance by
adding nonionic surfactant-contg. particles)

IT 497-19-8, Sodium carbonate, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(builders comprising **zeolite** and sodium carbonate)

coated by nonionic surfactants for high bulk d. detergents)
IT 9002-92-0, Polyethylene glycol dodecyl ether 9004-74-4D, Polyethylene
glycol methyl ether, fatty acid ester
RL: TEM (Technical or engineered material use); USES (Uses)
(nonionic surfactants; builders comprising **zeolite** and sodium
carbonate **coated** by nonionic surfactants for high bulk d.
detergents)

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L2 ANSWER 7 OF 9 CA COPYRIGHT 2001 ACS

AN 119:162902 CA

TI Manufacture of caking-resistant nonionic surfactant granule compositions with high **bulk density** and flowability

IN Yamashita, Hiroyuki; Kondo, Hiroyuki; Hatano, Koichi; Nakano, Katsunori; Toyoda, Koji

PA Kao Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C11D017-06

ICS C11D011-00

CC 46-3 (Surface Active Agents and Detergents)

FAN,CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 05125400 | A2 | 19930521 | JP 1992-107460 | 19920427 |
| PRAI | JP 1991-112929 | | 19910517 | | |
| | JP 1991-194268 | | 19910802 | | |

AB The title compns. (bulk d. 0.6-1.2 g/mL) are prepd. from 15-70 parts oil-absorbent porous carrier (pore vol. 100-600 cm³/100 g, sp. surface area 20-700 m²/g, oil absorption >100 mL/100 g) and 30-85 parts nonionic surfactants in a stirred vessel by forming a powder adhesion layer on the vessel wall forming a clearance from the stirring blades, granulating such layer into high-d. granules by the stirrer blade, and **coating** the granules with **fine powder**.
Granules were prepd. from 65 parts polyoxyethylene dodecyl ether and 35 parts amorphous silica, covered with 2 parts amorphous silica.

ST caking resistant nonionic surfactant granule; silica nonionic surfactant granule

IT Surfactants
(nonionic, granules of, manuf. of, caking-resistant)

IT 546-93-0, Magnesium carbonate 7631-86-9, Silica, uses
RL: USES (Uses)
(in caking-resistant nonionic surfactant manuf.)

IT 9002-92-0, Polyoxyethylene dodecyl ether
RL: TEM (Technical or engineered material use); USES (Uses)
(surfactants, granules, manuf. of caking-resistant)

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L4 ANSWER 8 OF 12 CA COPYRIGHT 2001 ACS

AN 99:214544 CA

TI Softener-containing granular detergent for textiles
IN Allen, Edwin; Dillarstone, Alan; Reul, Joseph Andre
PA Colgate-Palmolive Co., USA
SO Ger. Offen., 39 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|----------------|----------|--------------|-----------------|----------|
| PI | DE 3311568 | A1 | 19831020 | DE 1983-3311568 | 19830330 |
| | DE 3311568 | C2 | 19941020 | | |
| | US 4419250 | A | 19831206 | US 1982-366712 | 19820408 |
| | US 4421657 | A | 19831220 | US 1982-366713 | 19820408 |
| | ZA 8302108 | A | 19841128 | ZA 1983-2108 | 19830324 |
| | AT 8301191 | A | 19910915 | AT 1983-1191 | 19830405 |
| | AT 394380 | B | 19920325 | | |
| | FR 2524902 | A1 | 19831014 | FR 1983-5624 | 19830406 |
| | FR 2524902 | B1 | 19870731 | | |
| | SE 8301906 | A | 19831009 | SE 1983-1906 | 19830407 |
| | SE 459658 | B | 19890724 | | |
| | SE 459658 | C | 19891116 | | |
| | NO 8301236 | A | 19831010 | NO 1983-1236 | 19830407 |
| | NO 154758 | B | 19860908 | | |
| | NO 154758 | C | 19861217 | | |
| | ES 521306 | A1 | 19860201 | ES 1983-521306 | 19830407 |
| | CH 656395 | A | 19860630 | CH 1983-1890 | 19830407 |
| | DK 8301565 | A | 19831009 | DK 1983-1565 | 19830408 |
| | DK 160102 | B | 19910128 | | |
| | DK 160102 | C | 19910610 | | |
| | BE 896412 | A1 | 19831010 | BE 1983-210515 | 19830408 |
| | AU 8313250 | A1 | 19831013 | AU 1983-13250 | 19830408 |
| | AU 558317 | B2 | 19870129 | | |
| | NL 8301249 | A | 19831101 | NL 1983-1249 | 19830408 |
| | GB 2120293 | A1 | 19831130 | GB 1983-9604 | 19830408 |
| | GB 2120293 | B2 | 19851211 | | |
| | US 4482471 | A | 19841113 | US 1983-554049 | 19831121 |
| | US 4482630 | A | 19841113 | US 1983-554094 | 19831121 |
| | US 4482477 | A | 19841113 | US 1983-554095 | 19831121 |
| | FR 2541301 | A1 | 19840824 | FR 1984-2219 | 19840214 |
| FR 2541301 | B1 | 19870717 | | | |
| SE 8802489 | A | 19880704 | SE 1988-2489 | 19880704 | |
| SE 501159 | C2 | 19941128 | | | |
| SE 8802487 | A | 19880704 | SE 1988-2487 | 19880704 | |
| SE 503144 | C2 | 19960401 | | | |
| SE 8802490 | A | 19880704 | SE 1988-2490 | 19880704 | |
| SE 466155 | B | 19920107 | | | |
| SE 466155 | C | 19920514 | | | |
| SE 458763 | B | 19890508 | SE 1988-2488 | 19880704 | |
| SE 458763 | C | 19890831 | | | |
| PRAI | US 1982-366712 | | 19820408 | | |
| | US 1982-366713 | | 19820408 | | |

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> d 1-5 18 ti

L8 ANSWER 1 OF 5 USPATFULL

TI Method for producing nonionic detergent granules

L8 ANSWER 2 OF 5 USPATFULL

TI Method for producing detergent particles having high **bulk density**

L8 ANSWER 3 OF 5 USPATFULL

TI Method for producing nonionic detergent granules

L8 ANSWER 4 OF 5 USPATFULL

TI Process for producing nonionic detergent granules

L8 ANSWER 5 OF 5 USPATFULL

TI Process for increasing the density of spray dried, phosphate-reduced detergents

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> d 1-12 14 ti

L4 ANSWER 1 OF 12 CA COPYRIGHT 2001 ACS
TI Manufacture of granular nonionic laundry detergent compositions having excellent solubility and cleaning power at a high temperature

L4 ANSWER 2 OF 12 CA COPYRIGHT 2001 ACS
TI Coated polymer molding products with improved discoloration of coatings

L4 ANSWER 3 OF 12 CA COPYRIGHT 2001 ACS
TI Deodorizing and antimicrobial coatings and coating process and compositions therefor

L4 ANSWER 4 OF 12 CA COPYRIGHT 2001 ACS
TI Manufacture of compacted, granular sodium silicates for detergents

L4 ANSWER 5 OF 12 CA COPYRIGHT 2001 ACS
TI Adsorption of anionic surfactants on granules for use in detergents

L4 ANSWER 6 OF 12 CA COPYRIGHT 2001 ACS
TI Manufacture of metal-coated inorganic powders

L4 ANSWER 7 OF 12 CA COPYRIGHT 2001 ACS
TI Self-cleaning coatings

L4 ANSWER 8 OF 12 CA COPYRIGHT 2001 ACS
TI Softener-containing granular detergent for textiles

L4 ANSWER 9 OF 12 CA COPYRIGHT 2001 ACS
TI Coating compositions for insulated wires

L4 ANSWER 10 OF 12 CA COPYRIGHT 2001 ACS
TI Pourable washing compositions containing aluminosilicates and nonionics

L4 ANSWER 11 OF 12 CA COPYRIGHT 2001 ACS
TI Dust preventing agent

L4 ANSWER 12 OF 12 CA COPYRIGHT 2001 ACS
TI Adsorption of surface-active compounds and polymers by titanium dioxide modified with inorganic compounds

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